



Instruction

MI 020-454

March 1999

RTT20

**I/A Series® Temperature Transmitter
Intrinsic Safety Connection Diagrams**

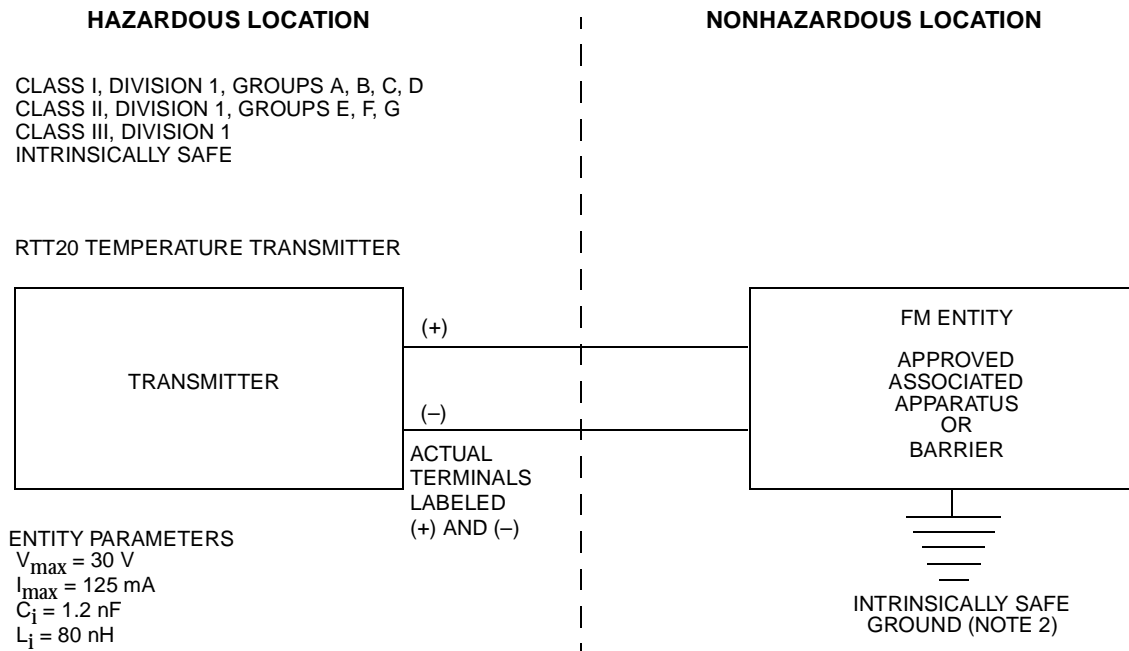


A Siebe Group Company

Intrinsically Safe Connection Diagrams

If your RTT20 I/A Series Temperature Transmitter is classified as intrinsically safe, connect per the following control diagrams for the appropriate agency.

Factory Mutual (FM) Certified



NOTES:

1. BARRIER MUST BE INSTALLED IN AN ENCLOSURE THAT MEETS THE REQUIREMENTS OF ANSI/ISA S82.01.
2. RESISTANCE BETWEEN INTRINSICALLY SAFE GROUND AND EARTH GROUND MUST BE LESS THAN 1 OHM.
3. CONTROL EQUIPMENT CONNECTED TO ASSOCIATED APPARATUS OR BARRIER MUST NOT USE OR GENERATE MORE THAN 250 V_{rms} OR V dc.
4. INSTALLATION SHOULD BE IN ACCORDANCE WITH ANSI/ISA RP 12.6 "INSTALLATION OF INTRINSICALLY SAFE SYSTEMS FOR HAZARDOUS (CLASSIFIED) LOCATIONS", ANSI/NFPA 70 "NATIONAL ELECTRICAL CODE", AND BARRIER MANUFACTURER'S INSTALLATION REQUIREMENTS.
5. AN APPROVED DUST-TIGHT SEAL IS REQUIRED FOR CLASS II AND III APPLICATIONS.

Figure 1. Loop Diagram for RTT20 Temperature Transmitters

Canadian Standards Association (CSA) Certified

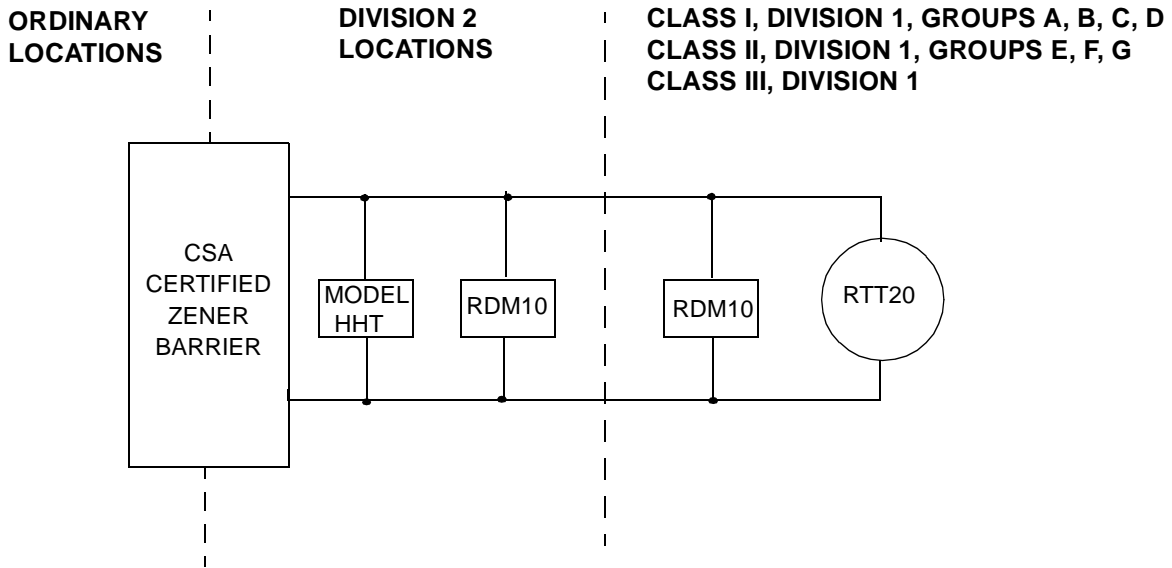


Figure 2. Loop Diagram for RTT20 Temperature Transmitter

Table 1. Foxboro Intrinsically Safe Apparatus Connected to CSA Certified Zener Barriers (Other Manufacturer's Associated Apparatus)

CSA Certified Zener Barriers Rated at:			Field Wiring Connection Criteria	Foxboro Intrinsically Safe Apparatus	
V _{max}	R _{min}	Temp. Class		Foxboro Model Number	Hazardous (Classified) Locations
28 V	300 Ω	T3C	Intrinsically Safe Field Wiring Terminals may connect to:	RTT20 Temperature Transmitters (a)(b)	Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Division 1.
28 V Diode	300 Ω —	T3C Return			

- (a) With and without RDM10 Remote Digital Meters and a Model HHT Hand-Held Terminal. A maximum of two meters can be used in a loop.
- (b) RTT20 suitable for T6 at 40°C (104°F); T4at 85°C (185°F) maximum ambient temperature.

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